

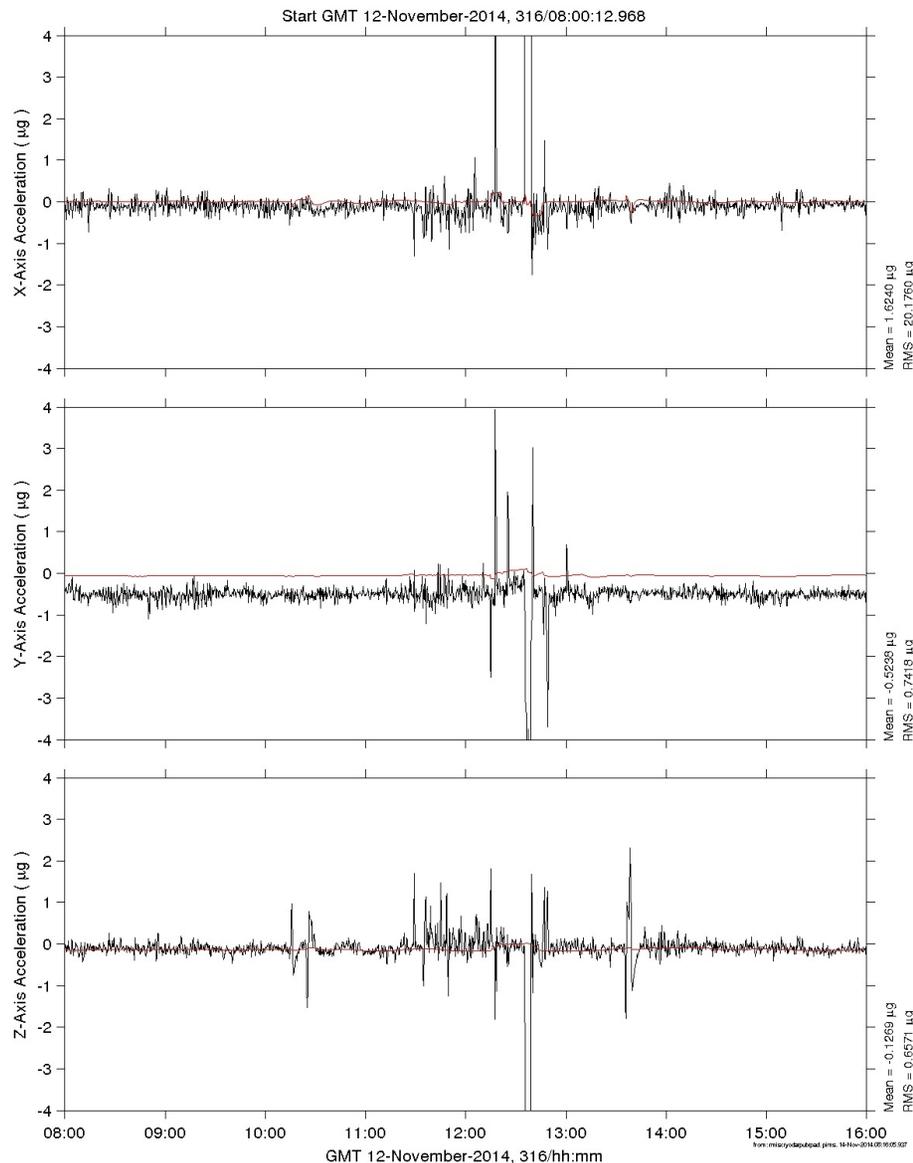
ATV5 PDAM Qualify

mams_ossbtmf at LAB1O2, ER1, Lockers 3,4 [135.28 -10.68 132.12]
0.0625 sa/sec (0.01 Hz)

Quasi-steady Roadmap
RED LINE IS RADGSE

SSAnalysis[0.0 0.0 0.0]

DELTA (ossbtmf - radgse): X = 1.6244, Y = -0.4739, Z = 0.0026 (μg)



Description

Sensor	MAMS ossbtmf 0.0625 sa/sec, 0.01 Hz
Location	LAB1O2, ER1, Lockers 3,4
Plot Type	Acceleration vs. Time

Notes:

- Flight controllers used ATV-5 to maneuver the the International Space Station (ISS) and avoid Chinese space debris.
- The European ATV-5 cargo vehicle was used to move the ISS out of the path of space debris on GMT 12-Nov-2014 at about 12:15.
- This maneuver is called a Pre-Determined Debris Avoidance Maneuver (PDAM) because the space debris (perhaps a lens cap) has been a tracked object from the Chinese spy satellite, Yaogan 12 for some time leading up to this activity.
- This debris has been a repeating conjunction concern for flight controllers, who decided to maneuver away. Such a Debris Avoidance Maneuver (DAM) is not uncommon for the ISS.
- This plot shows MAMS OSS data plotted per-axis versus time (in black) along with vehicle rates and angles data (in red).

Regime:	Quasi-Steady
Category:	Vehicle
Source:	ATV5 PDAM



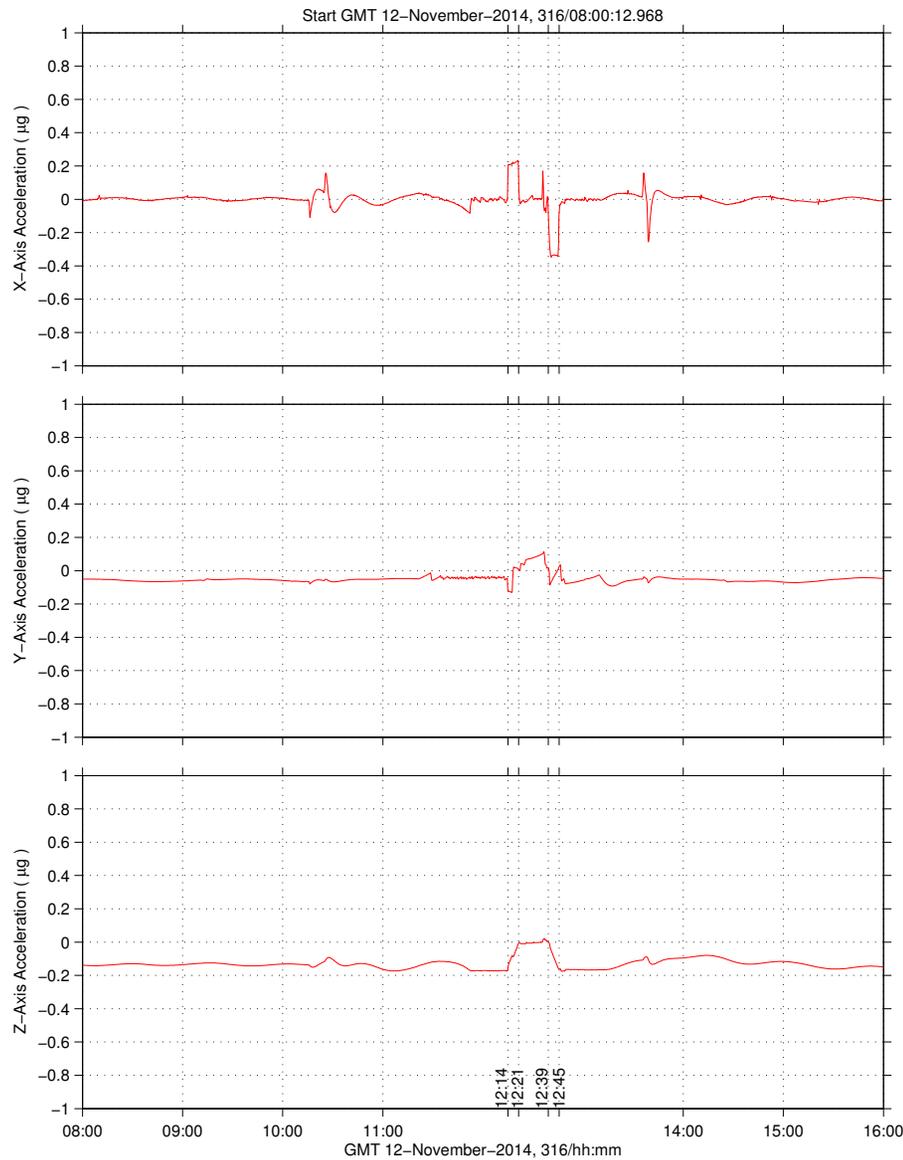
ATV5 PDAM Quantify

mams_ossbtmf at LAB1O2, ER1, Lockers 3.4-[135.28 -10.68 132.12]
0.0625 sa/sec (0.01 Hz)

Quasi-steady Roadmap
RED LINE IS RADGSE

SSAnalysis[0.0 0.0 0.0]

DELTA (ossbtmf - radgse): X = 1.6244, Y = -0.4739, Z = 0.0026 (μ g)



Description

Sensor	Rates and Angles Data 0.0625 sa/sec, 0.01 Hz
Location	
Plot Type	Acceleration vs. Time

Notes:

- This plot is a zoom-in on what was shown on previous page and without showing the MAMS data in order to see a clean version of what happened in the quasi-steady environment during the PDAM.
- The span from GMT 12:14 to 12:21 was the PDAM, while the span from 12:39 to 12:45 was the maneuver back to nominal station keeping.
- The X-axis experienced a step up to +0.22 μ g for about 7 minutes during the PDAM, while the Y-, and Z-axes both stepped about 0.14 μ g.
- After the PDAM was performed, the other maneuver took place to return to station keeping. During this 6-minute span, the X-axis experienced a step of -0.33 μ g before returning to baseline. The Y-, and Z-axes both ramped back to nominal baseline values.

Regime:	Quasi-Steady
Category:	Vehicle
Source:	ATV5 PDAM

